

# Physical and Economic Benefits Summary

July 2017

Part 1. Physical and Economic Benefits. Repeat this block for each category of public or non-public benefit quantified							
<b>PUBLIC BENEFITS</b>							
<b>ECOSYSTEM IMPROVEMENT</b>							
1. Physical Benefit Name: <i>Ecosystem</i>					Notes:		
2. Physical Benefit Measurement Units: <i>acres</i>					Notes:		
3. Net Physical Benefit Measurement <sup>1</sup>		2030			2070		
	Page #	With Project	Without Project	Difference	With Project	Without Project	Difference
		201.0	0.0	201.0	201.0	0.0	201.0
4. Annual Economic Benefit, 2015 \$ Million/Year				\$ 0.22			\$ 0.22
<b>RECREATION</b>							
1. Physical Benefit Name: <i>Recreation</i>					Notes:		
2. Physical Benefit Measurement Units: <i>visitor days per year</i>					Notes:		
3. Net Physical Benefit Measurement <sup>1</sup>		2030			2070		
	Page #	With Project	Without Project	Difference	With Project	Without Project	Difference
		277,683	-	277,683	277,683	-	277,683
4. Annual Economic Benefit, 2015 \$ Million/Year				\$ 1.93			\$ 1.93
5. Total Annual Monetized Benefit for the Category (sum of all row 4s.)				\$ 2.15			\$ 2.15
<b>NON-PUBLIC BENEFITS</b>							
1. Physical Benefit Name: <i>Water Supply (M&amp;I and Agriculture)</i>					Notes:		
2. Physical Benefit Measurement Units: <i>thousand acre-feet per year</i>					Notes:		
3. Net Physical Benefit Measurement <sup>1</sup>		2030			2070		
	Page #	With Project	Without Project	Difference	With Project	Without Project	Difference
		3.8	0.0	3.8	11.2	0.0	11.2
4. Annual Economic Benefit, 2015 \$ Million/Year				\$ 2.52			\$ 16.34

<sup>1</sup> Net of any non-mitigated physical effects

**Part 2. Total Economic Net Benefits and Allocated Cost by Benefit Category in 2015 \$ Million**

Sum of Annual Economic Net Benefits by Type	Page #	Ecosystem	Water Quality	Flood Control	Emergency Response	Recreation	Total Public Benefits	Non-Public Benefits	Total public and non-public benefits <sup>1</sup>
Sum of 2030 benefits from Part 1, Row 5		\$ 0.22	\$ -	\$ -	\$ -	\$ 1.93	\$ 2.15	\$ 2.52	
Sum of 2070 benefits from Part 1, Row 5		\$ 0.22	\$ -	\$ -	\$ -	\$ 1.93	\$ 2.15	\$ 16.34	
Present Value of Benefits over Planning Horizon using 3.5% Discount Rate		\$ 5.01	\$ -	\$ -	\$ -	\$ 45.01	\$ 50.02	\$ 221.44	\$ 271.45
Present Value of Total Project Costs Allocated to each Benefit Category		\$ 7.77	\$ -	\$ -	\$ -	\$ 69.84	\$ 77.61	\$ 343.59	\$ 421.19
Capital Costs Allocated to Each Benefit Category		\$ 5.98	\$ -	\$ -	\$ -	\$ 53.72	\$ 59.70	\$ 264.30	\$ 324.00
Total Requested Program Cost Share									

<sup>1</sup> Present value of total public and non-public benefits, total project costs, and total Program funding request must match numbers in Part 3

**Part 3. Present Value of Project Costs, Cost-Effectiveness Measure, and Public Benefit Ratio, Million 2015 \$ Present Value**

	Page #	2015 \$ Million Present Value
<b>Project Costs</b>		
Capital costs as defined in Program regulations		\$ 324.00
Interest during construction		\$ 17.07
Annual Costs (including future environmental/compliance, OM&R, and replacement costs)		\$ 80.12
		\$ -
		\$ -
		\$ -
Present Value of Total Project Costs <sup>1</sup>		\$ 421.19
Present Value of Cost of Least-Cost Alternative that Provides the Same Total Physical Benefits		TBD
Present Value of All Public and Non-public Benefits <sup>1</sup>		\$ 271.45
Ratio of Present Value of Total Monetized Net Benefits to the Total Project Costs		0.64
Present Value of Public Benefits <sup>1</sup>		\$ 50.02
Total Requested Program Cost Share <sup>1</sup>		\$ 11.95
Public Benefit Ratio: Ratio of Present Value of Monetized Net Public Benefits to the Total Requested Program Cost Share		4.19

<sup>1</sup> Must match numbers in Part 2